

## CSP West Midlands Regional Network

### Creating a Case for Change

#WMCSP

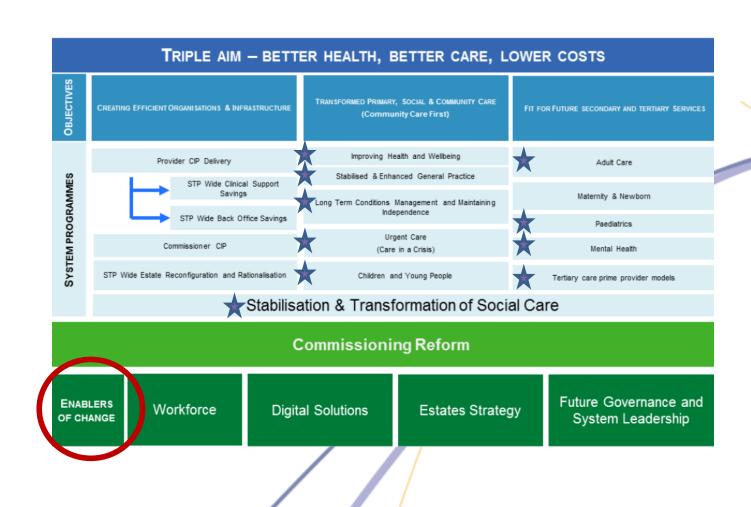


### 'The leadership of change'

Karen Middleton
Chief Executive
The Chartered Society of Physiotherapy

Twitter: @KMiddletonCSP

### Birmingham & Solihull STP – 5 year plan





'My greatest fear is that this profession will sleep walk into obscurity – that is, that you and I allow our profession to wither and die.'

(Physiotherapy UK, 2014)

"Knowing yourself is the beginning of all wisdom."

~Aristotle





#### The Top 10 Leadership Competencies, Grouped Into Five Themes

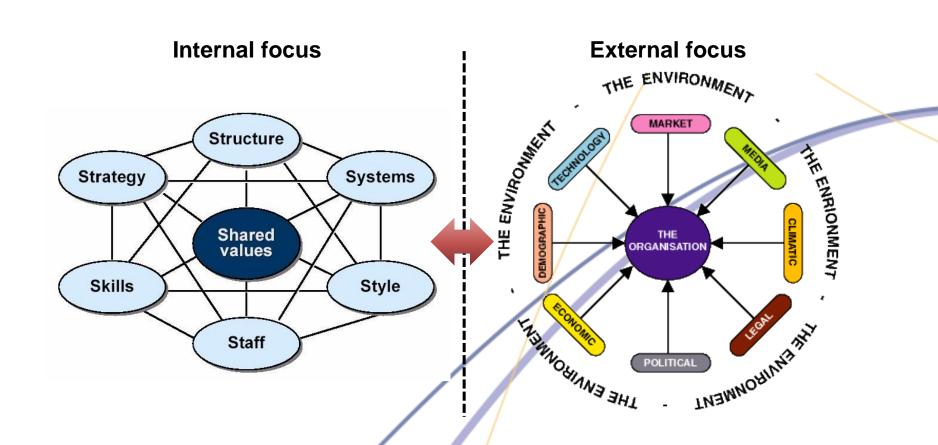
When 195 global leaders were asked to rate 74 qualities, these rose to the top.

#### PERCENTAGE OF RESPONDENTS



https://hbr.org/2016/03/the-most-important-leadership-competencies-according-to-leaders-around-the-world

#### The role of the leader



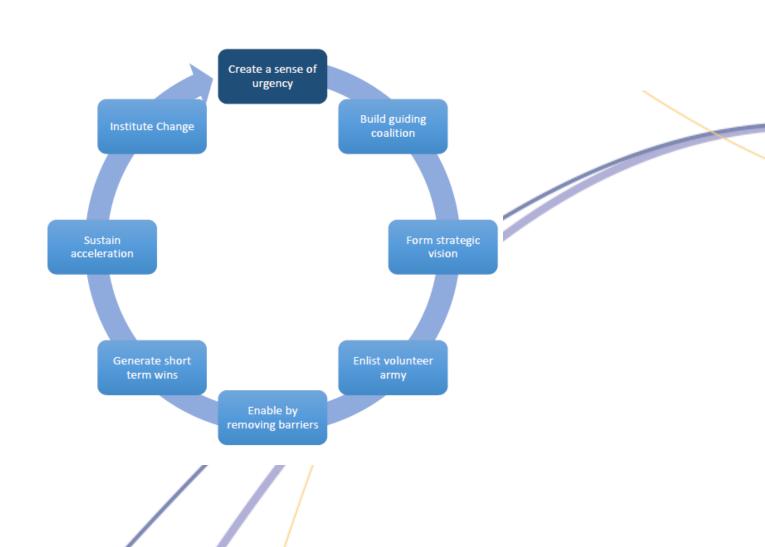
#### 9 priority STP regions

- 1. Frimley Health
- 2. Greater Manchester
- 3. South Yorkshire & Bassetlaw
- 4. Northumberland
- Nottinghamshire, with an early focus on Greater Nottingham and the southern part of the STP
- 6. Blackpool & Fylde Coast, with the potential to spread to other parts of the Lancashire and South Cumbria STP at a later stage.
- 7. Dorset
- 8. Luton, with Milton Keynes and Bedfordshire
- 9. West Berkshire



### Process for leading change

(Kotter, 2014)



### An example of leading change

- Seeing the context going forward
- Using data
- Not dissing history
- Being clear about drivers
- System and process for making change
- Communication, communication, communication
- Telling the story and listening to the stories of others
- Doing the right thing (even if it's not the popular thing).



### Becoming an agent for change

This is a story about four people named *Everybody*, *Somebody*, *Anybody* and *Nobody*.

Change was needed and **Everybody** was sure that **Somebody** would do it.

Anybody could have started it, but Nobody did it.

**Somebody** got angry about that, because it was **Everybody's** responsibility.

Everybody thought Anybody could do it, but Nobody realised that Somebody wouldn't do it.

It ended up that *Everybody* blamed *Somebody* when *Nobody* did what *Anybody* could have.



# Our mission for the CSP

To transform the health and wellbeing of individuals and communities by empowering our members and exerting our influence

# Our vision for physiotherapy

To transform lives, maximise independence and empower populations





### 

- Evidence matters
- LEAD: Leadership Exploration, Advocacy & Development
- 3. Our Digital Movement
- 4. Your service, your improvement



## Charitable Trust – Its Role In Supporting The Profession

Sue England

**Treasurer** 

The Chartered Society of Physiotherapy





The Charitable Trust is an independent charitable organisation which supports the advancement of physiotherapy education and research through predominantly annual awards made to members.





### Board of Trustees

11 Trustees
Which oversee the work
of two grant awarding
panels and makes
strategic funding
decisions to directly fund
activities

**Scientific Panel** 

15 members

**Education Panel** 

9 members





#### **Scientific Panel**

Physiotherapy Scheme A up to £150K Novice researchers Scheme B up to £50K Novice paediatric award £50K

Robert Williams Award £10K





#### **Education Panel**

Academically accredited courses

£300 - for a 20 credit course

£600 - for a 40 credit course

£800 - for a 120 credit course

£1200 for a 180 credit course (MSc)

£1500 for a PhD





#### **Education Panel**

Conference and presentation awards Up to £1000 per awardee

Education and development placements awards Members travelling overseas up to £3,500 per awardee

International education and development projects Up to £3500 per awardee

Elective clinical placement Up to £750 per awardee





#### Other awards / scheme

Directly funded project awards

Open access awards

Matched funding awards





#### **How Is The Trust Funded?**

2% of each full-practising member's subscription goes to fund the Charity's activities, so £6.00 from each full member's fees help to underpin both the research and education underpinning the profession.

Legacies and donations.





#### In the last year the Trust has awarded:

The Trust awarded £80,677 to educational awardees sub-divided into the following categories:

55 Academically Accredited Courses Awards

10 Conference & Presentation Awards

12 Education and Development Placement Awards

The Trust awarded the following for research grants:

- •£175,540.00 to Physiotherapy Research Foundation awards (divided between 4 awards)
- •2 matched funded bids with Action Medical Research (£221,198.50 contribution)
- 3 matched funded bids with Arthritis research UK (£250,000.000) http://www.csp.org.uk/about-csp/what-we-do/charitable-trust





#### Other projects funded in 2016

e-Learning strategy project - the e-Learning Project aims to enhance the range of learning and development opportunities available to CSP members through improving member access learning and development opportunities.

Safe and effective staffing levels in UK physiotherapy project - The purpose of the project is to develop a tool that provides a repeatable, critical thinking approach to explore the safety and effectiveness of services and staffing at a local level.





#### Other projects funded in 2016

#### Physiotherapy Works programme – comprising of:

- Workforce Data Model <a href="www.csp.org.uk/workforcedata">www.csp.org.uk/workforcedata</a>
- Falls Prevention Economic Model <a href="http://www.csp.org.uk/costoffalls">http://www.csp.org.uk/costoffalls</a>
- Physiotherapy Cost Calculator www.csp.org.uk/costcalculator
- Chronic Obstructive Pulmonary Disorder Project
- Hip Fracture Rehabilitation Project
- CSP Resources Project
- Case Studies Project
- Mentoring Scheme
- Business Skills Simulation
- Leadership Development Programme





#### Other projects funded in 2016

James Lind Alliance Physiotherapy Priority Setting Partnership - aims to integrate high quality person centred research into physiotherapy practice by identifying and prioritise the top 10 uncertainties or 'unanswered questions' about healthcare in specific areas

Implementation of research findings: a case study with Yorkshire and Humber Collaboration for Leadership in Applied Health Research and Care -The project is piloting implementation of a clinical guidelines resource called INSPIRE





#### Dissemination / outputs – A Key Criteria For Funding

In the last three years – the following outputs have been reported by awardees

- 15 conference proceedings
- 19 journal articles
- 1 Book report





#### **PROJECTS COMPLETED IN 2015**

Research Project Title	Research Location
Exercise and self-management for people with chronic knee, hip or lower back pain. A study of clinical and cost-effectiveness.	University of the West of England
An exploration of physiotherapists and patients views about using activity pacing with people with musculoskeletal chronic pain.	Oxford University Hospitals NHS Trust
An exploration of strategies to enhance physical activity in people with Rheumatoid Arthritis (RA).	University of the West of England
Exploring re-conceptualisation of pain neurophysiology education for back pain: a qualitative study.	South Tees Hospitals NHS Foundation Trust
Self-management: what are the perceived needs of those with MS.	York St John University
Psychologically informed Physiotherapy (PIP) for Chronic Pain: patient experiences of treatment and therapeutic processes.	Bath Centre for Pain Services
Self-referral to physiotherapy for musculoskeletal problems in primary care: stepping up the evidence.	Keele University





#### PROJECTS COMPLETED IN

2016

2016	
Research Project Title	Research Location
"Walk30X5": the development and feasibility evaluation of a generic walking programme for people with mild to moderate musculoskeletal conditions.	Oxford University Hospitals NHS Trust
A study to investigate the factors acquisition of work related spinal disorders.	Cardiff University
Clinical and cost effectiveness of increasing standing time in non-ambulant children with Cerebral Palsy: A pilot study.	Plymouth University
A qualitative patient perception study of physiotherapy practice and needs following multiple rib fractures in a Major Trauma centre.	Newcastle upon Tyne NHS Foundation Trust
Identifying key messages for physiotherapists treating female urinary incontinence: a Cochrane Overview of the evidence.	Glasgow Caledonian University
What is the optimal exercise package in physiotherapy management for early hip Osteoarthritis? An exploratory study to develop an intervention.	Oxford University Hospitals NHS Trust
The development of somatosensory discrimination tests in the lower limb following stroke.	Northern Devon Healthcare NHS Trust





### PROJECTS IN PROGRESS 2017

Research Project Title	Research Location
An evaluation of the feasibility, acceptability and efficacy of resistance training in adolescents with cerebral palsy (joint funded by CSPCT and AMR)	Brunel University
What are the effects of early versus delayed additional physiotherapy on arm function after stroke compared with usual care?	Glasgow Caledonian University
Increasing physical activity of people in residential homes.	St Georges University of London and Kingston University



### Technology to drive change

### Naomi McVey

North West Allied Health Professions (AHP)
Workforce Lead



# Creating the case for adopting new technologies in health and healthcare



amazon





#### Health Education England









### Sainsbury's





















How confident do you feel using technology in your personal life?
At work?





### Why focus on technology?

'The approach to accessing innovation in the NHS has become increasingly challenging; creating frustration for innovators who see the NHS as an interesting environment for demonstrating the value of their products, for patients who often have to wait long periods of time before lifesaving therapies are available, and for clinicians who are frustrated by the multiple barriers to both approval and adoption'

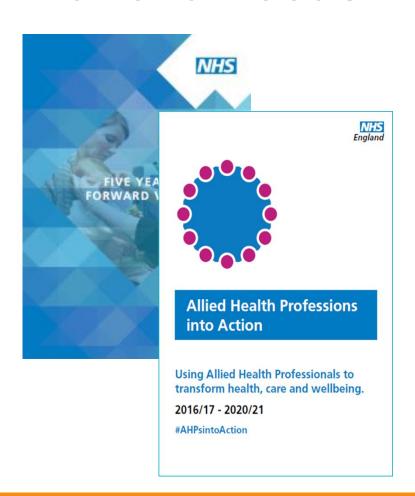
**Accelerated Access Review** 

Our values haven't changed but our world has, So the NHS needs to adapt to take advantages of the opportunities that science and technology offer patients, carers and those who serve them'

**Five Year Forward View** 



#### **National focus**



Improving uptake of technology is a priority for NHS England, NICE, Sustainability and Transformation Plans, Academic Health Science Networks, industry, providers & AHPs into Action

#### NHS Health Education England





#### Technology in health and care

- General health & wellbeing
- Technology enhanced care
- Drugs, diagnostics and devices
- Genomics
- Patient records & informatics
- Technology enhanced learning
- Social media networks











#### **Driving change**

Why?	Example
Improved health	C25K app; Nalmefene
Improved diagnosis	PIGF-based testing suspected pre- eclampsia; HeartFlow FFRCT
Less invasive testing or treatment	Virtual Touch Quantification
Improved patient outcomes	GreenLight XPS
Cost effectiveness	Inditherm
Better patient experience	Point-of-care coagulometers
Improved QOL	Urolift

https://www.nice.org.uk/about/what-we-do/into-practice/adoption-team

1 Compelling 2 improved care pathway case for change Making **10** Strong leadership the 9 Share learning case and success

**7** Impact and learning from other sites

3 Evidence of clinical effectiveness

4 Predicted costs & resource impact

5 Product options available

Genuine patient and staff input

6

8 Measure improvement and impact

## IN GOD WE TRUST; ALL OTHERS MUST BRING DATA. -W. EDWARDS DEMING

#### Sharing the good stuff



- CSP
- Conference abstracts
- Social media
- Local and national networks
- Academic Health Science Networks
- NICE local practice collection
- Fab NHS Stuff
- Local and national awards

'Look upwards and outwards. Always be willing to share, always be willing to steal.'

Kirstie Baxter, Head of Workforce Transformation (North West), Health Education England



#### Take home messages...

Improvement - not tech for tech's sake

Clinical and cost effectiveness and wider resource impact

Responsible for measuring and sharing improvement and impact



## Break #WMCSP



## Creating a Case for Change: The Journey of Change

**Nina White** 

Head of Transformation
Shropshire Clinical Commissioning
Group

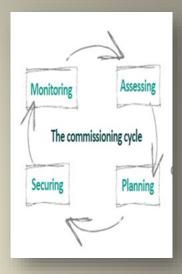
# Delivering the Forward View: NHS planning guidance 2016/17 – 2020/21



https://www.england.nhs.uk/resources/resources-for-ccgs/comm-for-value/

#### **Context**







https://www.kingsfund.org.uk/topics/sustainability-transformation-plans

#### The NHS Constitution for England

You(patients) have the right to be involved, directly
or through representatives, in the planning of
healthcare services commissioned by NHS bodies,
the development and consideration of proposals for
changes in the way those services are provided, and
in decisions to be made affecting the operation of
those services.

The NHS comes into contact with more than one million patients every 36 hours

#### Why change?



#### **Change Theories**



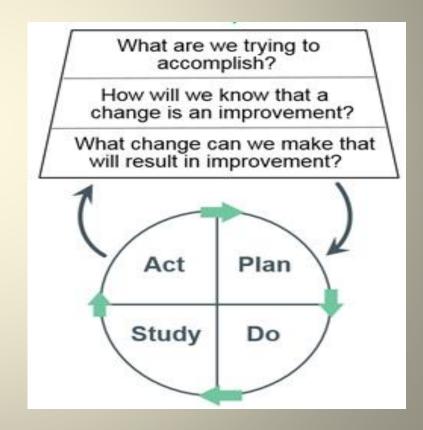
- Engineering
- Systems and processes
- Human relationships
- Adoption of change
- Transition
- Social interactions
- Organisational development
- Complexity

#### **Change Models**

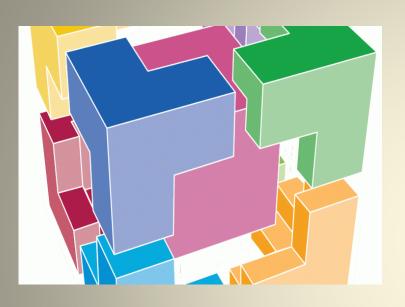
Acknowledgment NHS England accessed 19/05/2017 https://www.england.nhs.uk/ourwork/qual-clin-lead/sustainableimprovement/change-model

Leadership Spread and by all adoption Our Motivate **Improvement** shared and mobilise tools purpose **Project** System and performance drivers management

The Improvement Guide: a practical approach to enhancing organizational performance. Gerald Langley et. al



#### **Approaches & Skills**









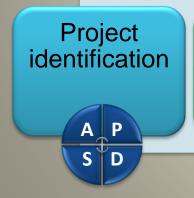
### 'All improvements involve a change but not all changes are improvements'. Goldratt



How will we know if the change leads to an improvement?

### Measurement throughout the project cycle





Getting a baseline

A P S D Did project make a difference?

A P S D Will project sustain?

A P S D Evaluating worth of the project

A P S D

#### Measurement

- 1. Decide aim
- 2. Choose the measures (improvement, research, judgement)
- 3. Define Measure
- 4. Collect the data
- 5. Analyse and present
- 6. Review the measures
- 7. Repeat steps 4 to 6

## How to influence for change in the NHS

- Understand the process for change in your organisation
- Be clear about what you are proposing and why
- Use evidence to demonstrate the case for change
- Engage with stakeholders
- Understand the risks
- Monitor and evaluate progress





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#### Resources

- http://www.ihi.org/Pages/default.aspx
- https://www.leadershipacademy.nhs.uk/
- https://www.england.nhs.uk/integrated-carepioneers/resources/tools/
- http://webarchive.nationalarchives.gov.uk/20
  121116082105/https://www.institute.nhs.uk/
  quality and service improvement tools/qual
  ity and service improvement tools/statistica
  l process control.html



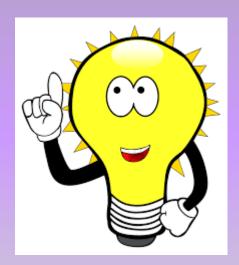
#### So you have an idea?

#### Teresa Jones

Head of Research

The Robert Jones and Agnes Hunt Orthopaedic Hospital Foundation Trust

#### So you have an idea?



The Robert Jones and Agnes Hunt
Orthopaedic Hospital NHS Foundation Trust
Research Office



## What do you need to move your idea into practice?

## Evidence



#### How do you move the idea from "Idea" to Routine Practice?

- Discuss the idea with your colleagues
  - Is it feasible?
  - Does it make sense?
- Literature Search
  - Has it been tried before?
- Acceptability to pt. group



#### Is my idea Research?



- Audit / Service Evaluation / Research?
- Visit the Health Research Authority (HRA) at -<u>http://www.hra.nhs.uk/resources/before-you-apply/</u>
- Contact your Research Dept. what support do they offer?
- Establish a "Expert Patient" Group (PPI)



#### Is the idea RESEARCH?

- What is the definition of research?
  - New knowledge, generate hypotheses, test hypotheses
  - Quantitative or Qualitative
  - Clear defined questions, aims, objectives
  - Additional to routine pathway
  - May involve randomisation
  - Normally requires Ethical review
  - Complete the decision tool at <a href="http://www.hra-decisiontools.org.uk/research/">http://www.hra-decisiontools.org.uk/research/</a>



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#### Protocol

- <a href="http://www.hra.nhs.uk/research-community/before-you-apply/protocol/">http://www.hra.nhs.uk/research-community/before-you-apply/protocol/</a>
- What is the question?
- What data do you need to prove your hypothesis?
- What type of participants (eligibility)?
- How do you collect this data?
- When do you collect the data?
- Who is involved?
- How many participants do you need?
- How are you going to analyse the data?



- Protocol √
- Approval
  - Does it need ethical review and approval?
    - NHS staff / pts / previously collected data?
  - It will need Health Research Authority (HRA) approval
    - All NHS research on NHS property will need HRA approval.



#### Research Yes – Approval?

- Ethics and HRA approval:
  - Complete your "one stop" application via the Integrated Research Application System (IRAS) at www.myresearchproject.org.uk

- What's the process at your Trust? Do you need Trust confirmation?
  - Visit your Research dept.



- Protocol √
- Approval ✓

#### Funding



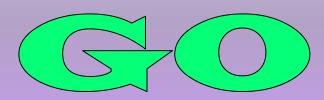
- What is research cost? What is support cost? What is treatment cost? See: <a href="https://www.gov.uk/government/news/attributing-the-costs-of-health-social-care-research-development-acord">https://www.gov.uk/government/news/attributing-the-costs-of-health-social-care-research-development-acord</a>
- Expenses for participants?
- Where from?
  - Charity
  - Trust funds
  - NIHR
  - Commercial



- Protocol ✓
- Approval ✓
- Funding √
- Supporting documents- Required for approval process
  - Patient Information sheet
  - Consent Form
  - (Good Clinical Practice) GCP training
  - Up to date CV



- Protocol √
- Approval ✓
- Funding ✓
- Supporting documents ✓
- Green light ✓
  - All above are in place
  - Trust is happy







#### Research Yes — final straight?

- Protocol ✓
- Approval ✓
- Funding ✓
- Set-up & go ✓
- Collected your data ✓
- Analysis ✓
- Publication
  - Where? Biggest impact?



- Protocol √
- Approval ✓
- Funding ✓
- Set-up & go ✓
- Collected your data ✓
- Analysis ✓
- Publish ✓



### So you have an idea?

#### **Any Questions?**

Teresa Jones, Research Manager, RJAH <a href="mailto:teresa.jones@rjah.nhs.uk">teresa.jones@rjah.nhs.uk</a>

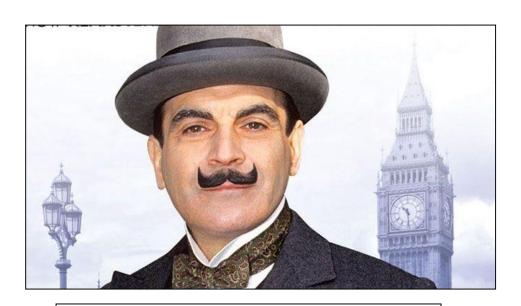




# Creating a Case for Change – Failure – Tenacity – Passion – Success

## Andrea Bailey PhD MCSP

Clinical Specialist Physiotherapist – Sports Injury









Jobbing Physio	Academic Researcher
Patient Problem	Research Question
Training/ Experience/ Referral/ Ax	Literature Review/ Justification
Working Diagnosis	Hypothesis
Assessment	Baseline Outcome Measures
Treatment	Intervention
Re-assessment	Post-intervention Outcome Measures
Evaluation	Data Analysis
Reflective Practice	Discussion
Progression of Treatment	Conclusion
Evaluation Reflective Practice	Measures Data Analysis Discussion

# CHANGE

# Proposal. Ethics. Study. Write-Up. Viva. Dissemination.











# One Job! ISAKOS - Shangai 2017















# Non-Concurrent Rehabilitation Improves Subjective & Objective Outcomes following ACL Reconstruction



**Delivering Outstanding Patient Care** 

#### Introduction

- Traditionally ACL rehab is offered in a concurrent format.
- "Interference Effect" has been proposed within non-injured and athletic populations.
- No previous research has considered this issue systematically in clinical populations.

(Gravelle et al. 2000, Docherty and Sporer 2000, Wilson et al. 2012)

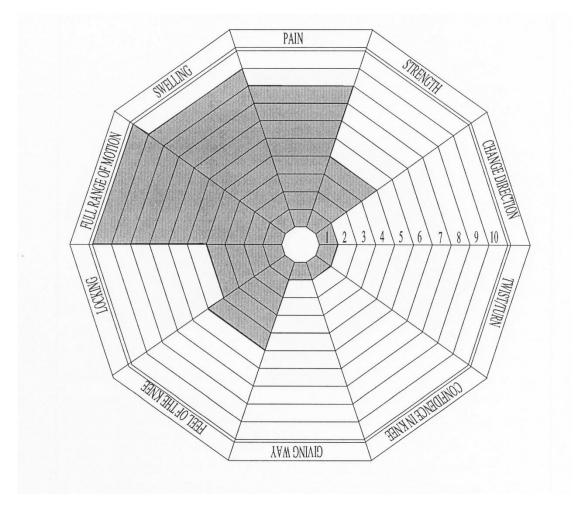
## Objective

 Assess the effects of reconstruction surgery and 24-weeks of non-concurrent strength and endurance rehab [NCON].

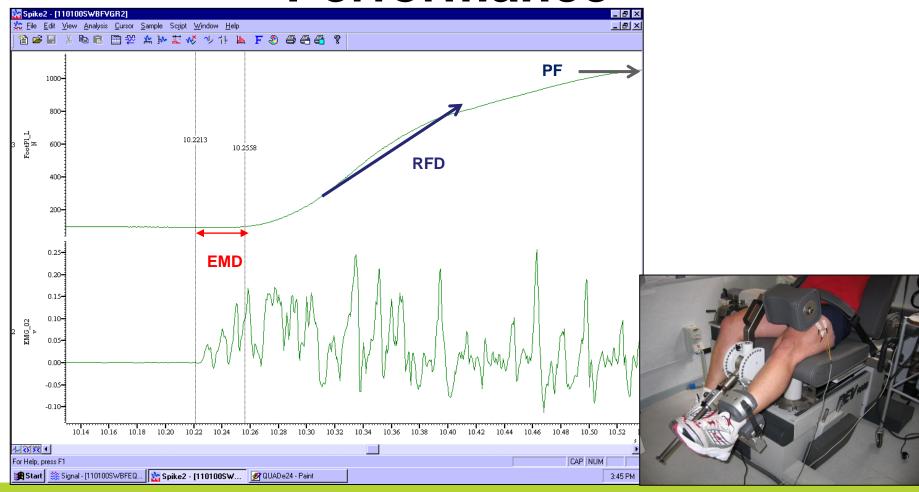
48 week follow-up.

<b>Subjective Outcomes</b>	Objective Outcomes
KOOS (Roos et al., 1998)	Peak Force (Minshull et al., 2009)
	Rate of Force Development (Minshull et al., 2009)
IKDC (Irrgang et al., 2012)	Electromechanical Delay (Minshull et al. 2009)
	Sensorimotor – Force Matching (Gokeler et al., 2014)
Performance Profile (Doyle & Parfitt, 1997)	Hop for Distance (Clark, 2001)
	AP joint laxity (Duthon et al., 2006, Gleeson et al., 1996)

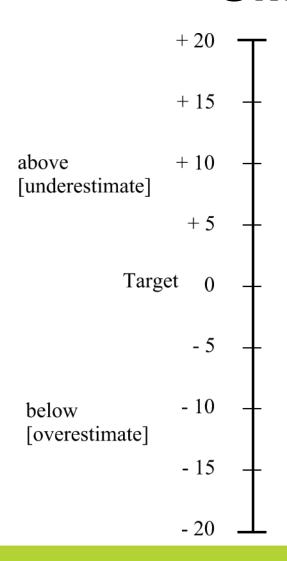
## Performance Profile – an example.



# Assessment of Neuromuscular Performance



#### SMP – Force Error



Matching and rating of a blinded (50% PF) target was recorded.



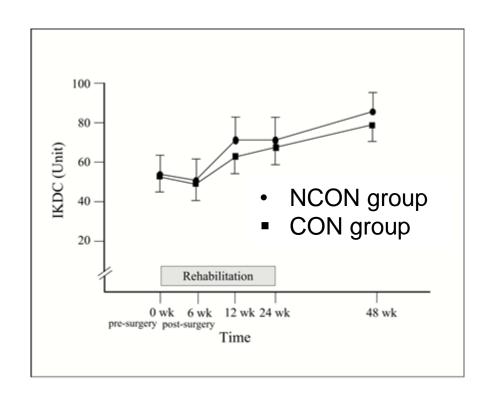
# Pre-surgery, 6, 12, 24 and 48 weeks post ACL reconstruction

Study Group	Male (n)	Female (n)	Age (years)	Height (m)	Body Mass (kg)	Time from injury to surgery (months)	Lost to FU
CON	29	2	37.7 ± 8.8	1.77 ± 0.07	81.4 ± 12.3	9.4 ± 6.9	9
NCON	27	6	36.6 ± 9.0	1.76 ± 0.09	82.4 ± 11.1	8.3 ± 6.7	7
Limited Testing CON	13	5	34.2 ± 8.1	1.79 ± 0.09	81.1 ± 17.3	9.1± 7.2	3

#### Results IKDC

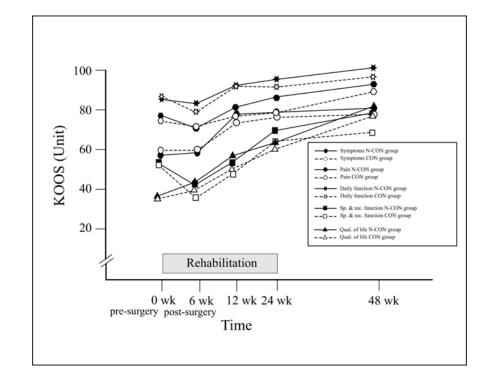
Largest significant interaction and difference between NCON and CON was at 12 weeks.

Group mean peak relative difference NCON versus CON at 12 weeks post-surgery = 10.8%



#### **Results KOOS**

NCON showed superior throughout the investigative period ( $F_{(2.2, 134.7)GG} > 5.5$ ; p < 0.001). *A priori* analysis suggested most interaction occurred at the 12 week post-operative assessment occasion ( $F_{(1,60)GG} > 21.7$ ; p < 0.001).

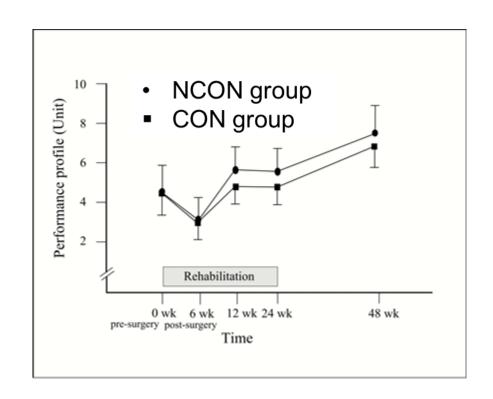


All 5 domains maintained a similar order of ranking over 48 weeks.

#### **Results Performance Profile**

NCON group reported superior results ( $F_{(1.9, 121.4)GG} = 14.6$ ; p<0.001) over the 48 weeks assessment period.

Group mean peak relative difference NCON versus CON at 24 weeks postsurgery = 12.7%.



### Results Summary

Objective Outcome	NCON advantage (Group mean peak relative difference)	Significant Interaction Phase
Нор	<b>12.2%</b> [F <sub>(1,62)</sub> = 13.1; p<0.005]	12 weeks
ATFD	<b>14.2%</b> [F <sub>(1,62)</sub> = 7.1; p<0.005]	No phase (48 weeks)
PF - Extensors	<b>7.7% and 10%</b> $[F_{(1,62)} = 5.8; p<0.05 \text{ and } F_{(1,62)} = 9.3; p<0.005]$	6 weeks and 24 weeks
PF - Flexors	<b>10.5% and 14%</b> $[F_{(1,62)} = 6.1; p<0.05 \text{ and } F_{(1,62)} = 13.1; p<0.001]$	6 weeks and 12 weeks
RFD - Extensors	<b>11.4%</b> [F <sub>(1,62)</sub> = 15.7; p<0.005]	24 weeks
RFD - Flexors	<b>20.5%</b> [F <sub>(1,62)</sub> = 28.4; p<0.005]	24 weeks
EMD - Extensors	<b>10.1%</b> [F <sub>(1,62)</sub> = 77.3; p<0.005]	No phase (48 weeks)
EMD - Flexors	<b>11.9%</b> [F <sub>(1,62)</sub> = 11.5; p<0.005]	No phase (48 weeks)
SMP - Extensors	<b>5.6%</b> [F <sub>(1,62)</sub> = 7.3; p<0.01]	No phase (48 weeks)
SMP - Flexors	<b>4.7%</b> [F <sub>(1,62)</sub> = 7.1; p<0.01]	No phase (48 weeks)

No significant differences between CON and Limited Testing CON groups

# Clinical Implication

- Both CON and NCON rehabilitation are efficacious.
- NCON provides up to 20.5% advantage compared to CON rehab.
- NCON rehab can be applied immediately in a clinical setting, without extra cost.

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- Docherty D and Sporer B. A proposed model for examining the interference phenomenon between concurrent aerobic and strength training. *Sports Med.* 2000;30(6):385-394.

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## Thank you.

NCON rehabilitation following surgical ACL reconstruction will improve subjective outcomes by up to 12% and objective outcomes by up to 20.5%



# Lunch #WMCSP



# Creating a Case for Change Alison Aries

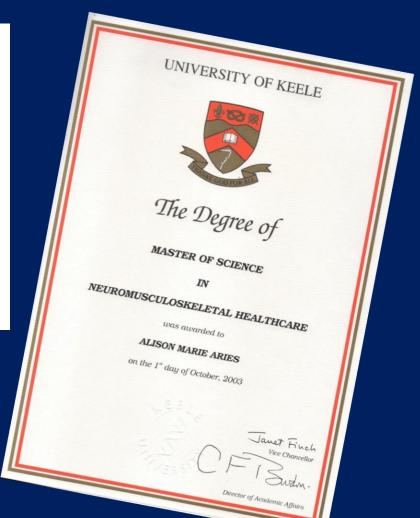
NIHR Research Fellow



- Qualified from Wolverhampton School of Physiotherapy in 1986
- Worked in Redditch, Dudley and Wolverhampton
- Worked in senior positions in Surgical and ITU /elderly care and within the Community Intermediate Care Team
- Developed specialist neurological skills



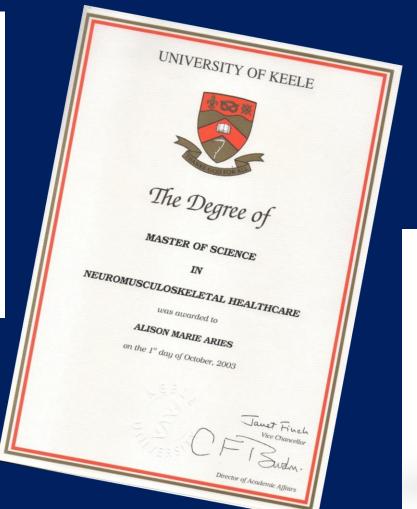




- Learned critical appraisal skills
- Dissertation:
  Exploration of Critical
  Appraisal Skills in
  Physiotherapy Staff and
  their Perception of
  how this Influences the
  Implementation of
  Evidenced-Based Practice
- Presented at CSP Congress 2005



























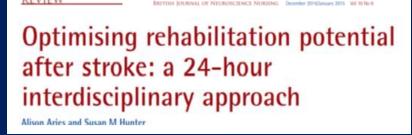
RDS
CRN
CTU
SOPS
TOPS
GCP
SAES
TMGS
PPI/PPIE etc. etc.



Research idea



Publications



- Development work with clinicians
- Development work with PPIE advisors
- Research experience
- Knowledge base



- Doctoral fellowship
- ICA HEE / NIHR Integrated Clinical Academic Programme for non-medical healthcare professions
- 3 years full time
- Based on current salary
- Current research commitments and research experience, publications, PPIE, plain English summary, Scientific abstract of research, Literature review, plans for dissemination, proposal with costings, career intentions and collaborations, plan of support and supervision, proposed training, and development, programme and plan for ongoing clinical experience



#### How did I achieve the NIHR Clinical Academic Fellowship?

Early PPIE work

Focus groups with clinicians

Lots of reading!

Stroke research module at keele

**Publications** 

Lots of networking and support from many different people – especially my supervisor Dr Sue Hunter

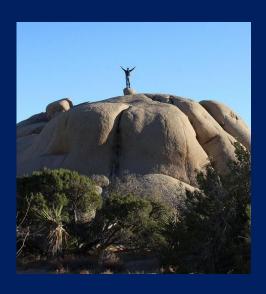
Research post – worked as a blinded assessor on the FAST INdiCATE trial

RDS grant achieved – workshop with clinicians and PPIE advisors



## After nearly two years I applied

- Lengthy application process
- Shortlisted and interviewed







#### Developing clinical skills by working with experts

Collaboration opportunities and conferences

NIHR courses, webinars etc.

#### Funding

Opportunities provided by an NIHR fellowship

Kings Fund Emerging
Leaders course
Advanced Bobath Course
Randomised clinical trials
courses

## Mentoring, supervision, guidance, networking

Developing and leading a clinical trial and trial team with CTU support

Sensorimotor control in neurological practice Movement Science Based Approach to Stroke Rehabilitation



## Stage 1 - Consensus study with clinicians

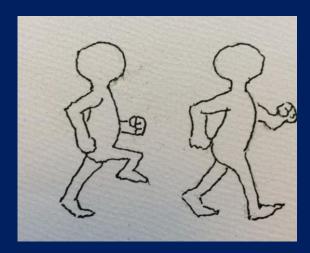
**Objective:** To develop treatment protocols for:



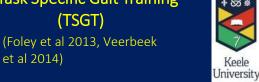
**Mobilization and Tactile** Stimulation (MTS) (Hunter et al 2006)



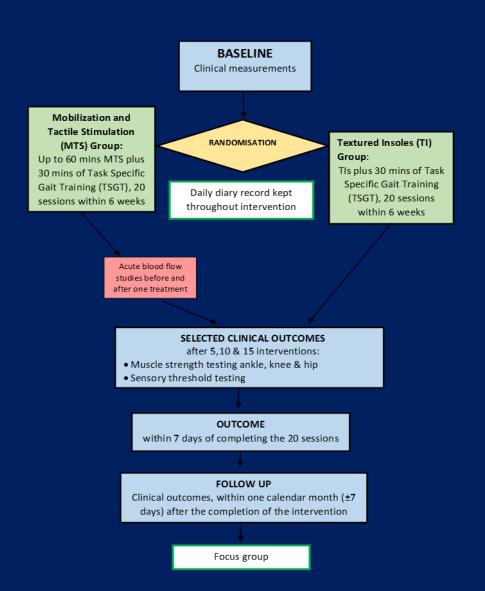
**Textured Insoles (TIs)** (Christovao et al 2013)



**Task Specific Gait Training** (TSGT) (Foley et al 2013, Veerbeek







Stage 2: Feasibility Study (MoTaStim-Foot)



## Stage 2: Feasibility Study (MoTaStim-Foot)

#### Progress to date:

- 33 of the 34 participants now recruited
- Protocol has been submitted to Pilot and Feasibility studies for publication



## What does the future hold?

- March 2018
- NIHR Clinical Trials Fellowship application
- Larger clinical trial: RCT of MTS+TSGT vs TI+TSGT stroke with subgroup analysis
- Influencing clinical practice and clinical guidelines to improve outcomes for stroke survivors



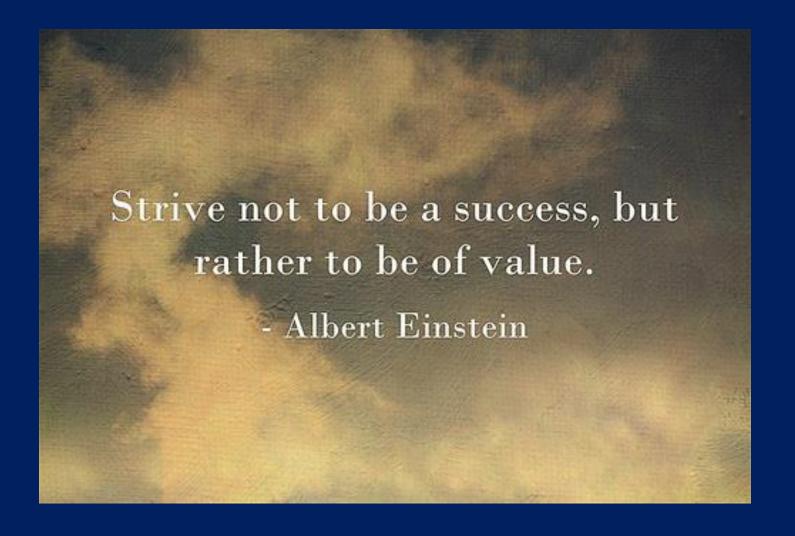
## The case for change?

- Opportunities, time, resources, and support for clinicians to engage in research
- Clinicians driving research based on clinical questions
- Greater collaboration and partnership between academics and clinicians
- Clinical academic career pathways











## Acknowledgements

My supervisory team

The clinicians taking part in the study

The participants who have taken part in MoTaStim-Foot

The research therapists and assessors

**Keele University** 

Norwich Clinical Trials Unit

The NIHR for funding the work as part of an NIHR Clinical Academic Fellowship.









## lmages:

Uniform image: https://www.flickr.com/x/t/0091009/photos/govim/9039275749/

Lecturing: https://www.flickr.com/x/t/0099009/photos/53801255@N07/8736820287/

Ivory Tower image <a href="https://flic.kr/p/8c6XtS">https://flic.kr/p/8c6XtS</a>

Treadmill image https://www.flickr.com/x/t/0099009/photos/29638108@N06/5618665304/

Breast cancer ribbon image: https://www.flickr.com/x/t/0091009/photos/yongjiet/1673359716/

Long road image: https://www.flickr.com/x/t/0098009/photos/philwirks/5575978625/

Character question mark image: https://www.flickr.com/x/t/0090009/photos/paulbrigham/8431849810/

Light bulb image: https://flic.kr/p/92g6TM

Success image: https://www.flickr.com/x/t/0092009/photos/tinyfroglet/4269679309/

Climb mountain image: https://www.flickr.com/x/t/0092009/photos/mr-pi/32567158813/

Leap of faith image: <a href="https://www.flickr.com/x/t/0096009/photos/ornellas/4998737249/">https://www.flickr.com/x/t/0096009/photos/ornellas/4998737249/</a>

Albert Einstein quote: https://www.flickr.com/x/t/0097009/photos/bullgator0892/11370959876/





## **CAPHR**

## **Dr Sue Hunter**

Research Facilitator Physiotherapist

## Can Dr Council for Allied Health Professions Research

## CAHPR – what is it?



- Council for AHP Research
- http://cahpr.csp.org.uk/
- Opportunities for learning, sharing, networking, collaborations and access to advice and support
- Comprises a strategy committee, a professoriate and a UKwide regional hub network

## Supported by 12 AHP organisations

- British and Irish Orthoptic Society
- College of <u>Paramedics</u>
- Chartered Society of <u>Physiotherapy</u>
- Royal College of <u>Speech & Language Therapists</u>
- Society and College of <u>Radiographers</u>
- The College of <u>Podiatry</u>
- Royal College of <u>Occupational Therapists</u>
- The British **Dietetic** Association
- The British Association of **Prosthetists and Orthotists**
- British Association of **Art Therapists**
- The British Association for Music Therapy
- The British Association of <u>Dramatherapists</u>



## Mission

Can Dr

Council for
Allied Health
Professions Research

"to develop AHP research, strengthen ev of the professions' value and impact for enhancing service user and community care, and enable the professions to speak with one voice on research issues, thereby raising their profile and increasing their influence."

## CAHPR Activities

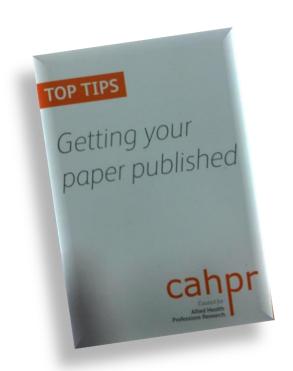


- Workshops
- Signposting
- Mentoring
- Small awards scheme
- Journal clubs
- Evidence based practice groups / CAT groups
- Public Health Awards
- Top Ten Tips
- Information circulation

## Top Ten Tips

Cahpr Council for Allied Health Professions Research

http://cahpr.csp.org.uk/documents/cahprs-top-tips-leaflets







Keele

#### **CAHPR Keele Hub Leader:**

Dr Sue Hunter

s.m.hunter@keele.ac.uk

#### **CAHPR Keele Hub Facilitators:**

Dr Claire Stapleton
Kay Stevenson
Robert Bradshaw-Kilditch
Dr Martin Thomas
Yvonne Rimmer



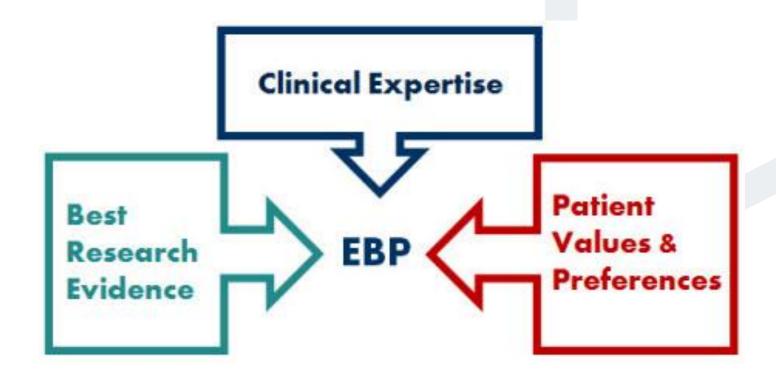
# Journey of Change: Evidence Based Practice

Yvonne Rimmer, Tina Hadley-Barrows, Katrina Humphreys, Lucy Huckfield
NIHR Research Facilitators

Kay Stevenson

Consultant Physiotherapist and Senior Knowledge Mobilisation Fellow

## Evidence based practice





## Background



Expert Practice

Leadership & education

Redesign

Research

#### Key Words

Critically appraised topic (CAT), evidence-based practice.

179

Critically Appraised Topics (CATs)

One method of facilitating evidence-based practice in physiotherapy

Summary A critically appraised topic (CAT) is a summary of the best available evidence, which answers a clinical question and includes a clinical 'bottom-line'. A CAT is essentially patient-based, in that it begins with a clinical question generated from a specific patient situation or problem. As such, a CAT has direct relevance to clinicians, who may sometimes feel that the concepts of evidence-based medicine are idealistic and far removed from real clinical practice. This paper presents one method of helping to develop the skills of critical appraisal and present research findings in a clear and consistent manner, so that their clinical relevance may be understood and used to facilitate clinical decision-making. It discusses the essential steps in the formation of CATs and presents some examples, which were developed as part of a new module on evidence-based practice for physiotherapists. These examples are presented to show that the key components and uses of CATs are applicable to all physiotherapists, across all areas of practice. The use of CATs within physiotherapy practice offers a consistent method of critically appraising and summarising the results of research findings. Their formation, use and evaluation within the clinical environment offer one method of increasing confidence in understanding research as well as dissemination of important research findings within

physiotherapy.

by Nadine Foster Panos Barlas Linda Chesterton Juliana Wong

have made it easier to implement (McKibbon, 1999). A large component of this includes harnessing and using healthcare literature as the basis for practice decisions, in conjunction with clinical experience and the patients' unique situations (McKibbon, 1999). Although medicine was one of the first to adopt evidence-based practice (EBP) principles, other healthcare disciplines have also adopted similar principles and processes. The practices of evidence-based nursing, evidence-based mental health, evidence-based child health and evidencebased dentistry are examples of those which have been recognised in the literature, through development of specific journals, electronic mail-base discussion networks and a multitude of Internet sites. As more clinical care is provided by healthcare teams, EBM has the potential to provide a common language since the principles, strategies and tactics of EBM are universally applicable throughout all health professions (Sackett et al, 1997).

Despite increasing awareness that we cannot rely on the information and





## The Keele 'Evidence Based Practice Groups'

## Musculoskeletal Research Facilitation Group - The CAT group

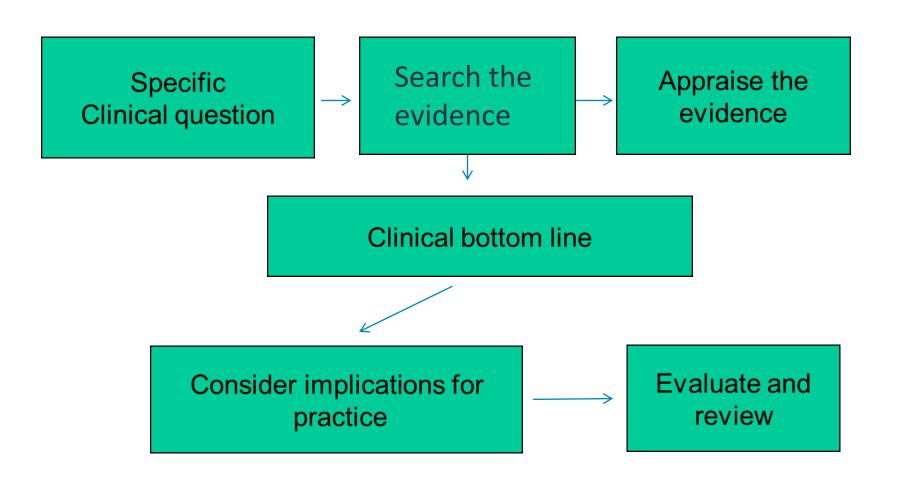


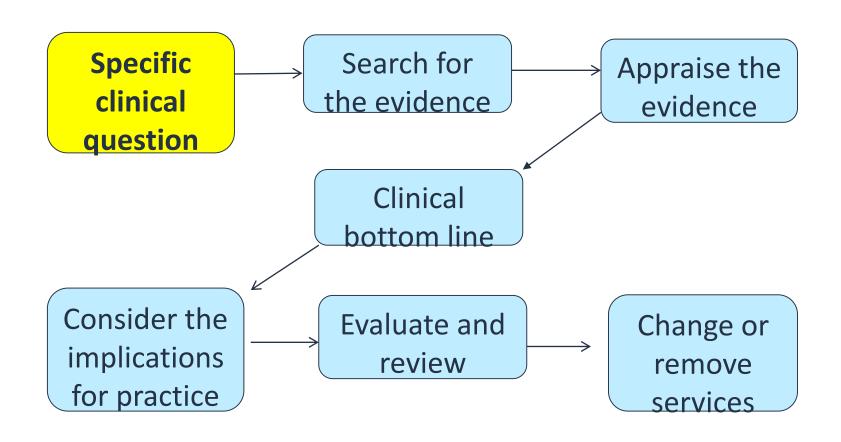


## Critically Appraised Topic (CAT)

- A CAT is developed from a clinical question which is structured and answerable
- It provides a summary of the best available evidence
- Answers the clinical question and provides a 'clinical bottom line'

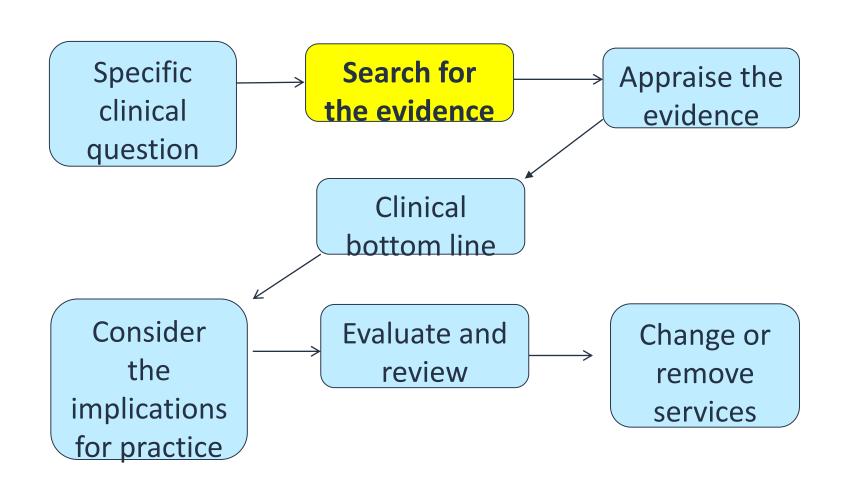


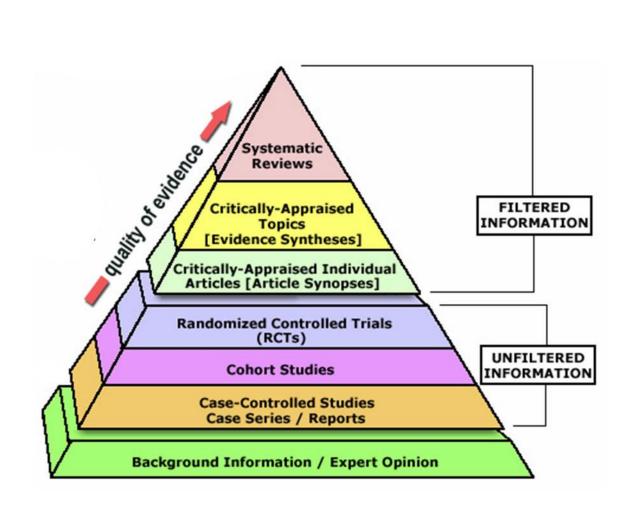


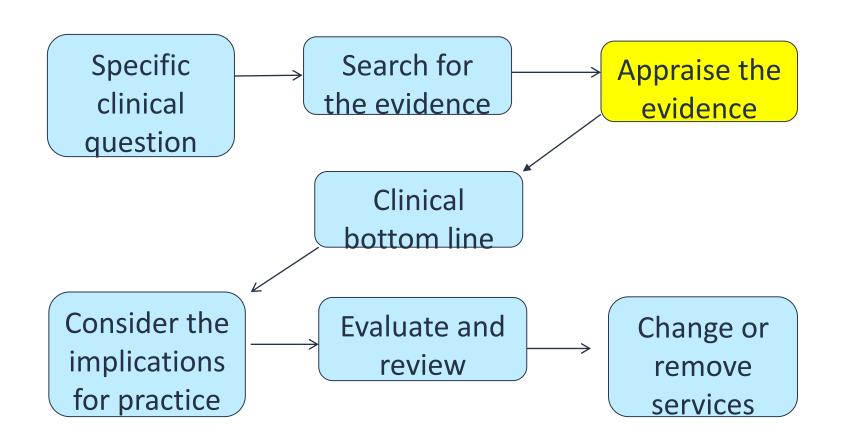


## PICO principle

Patient, Population or Problem What are the characteristics of the patient or population? What is the condition or disease of interest? Intervention or Exposure What do you want to do with this patient (e.g. treat, diagnose, observe)? Comparison What is the alternative to the intervention (e.g. placebo, different drug, surgery)? Outcome What are the relevant outcomes (e.g. morbidity, death, complications)?







### CASP CHECKLISTS

This set of eight critical appraisal tools are designed to be used when reading research, these include tools for Systematic Reviews, Randomised Controlled Trials, Cohort Studies, Case Control Studies, Economic Evaluations, Diagnostic Studies, Qualitative studies and Clinical Prediction Rule.

These are free to download and can be used by anyone under the Creative Commons License.



#### CASP Checklists (click to download)

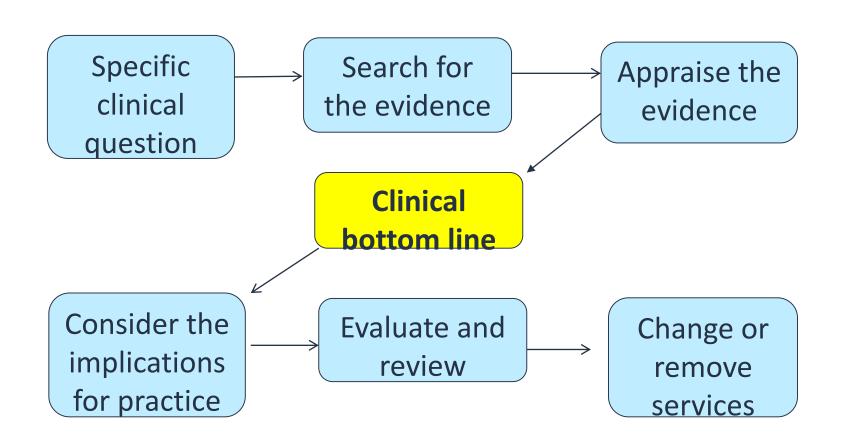
CASP Systematic Review Checklist	CASP Qualitative Checklist
CASP Randomised Controlled Trial Checklist	CASP Case Control Checklist
CASP Diagnostic Checklist	CASP Cohort Study Checklist
CASP Economic Evaluation Checklist	CASP Clinical Prediction Rule Checklist

http://www.casp-uk.net/casp-tools-checklists

## Appraise the evidence

(Systematic review)

- Clearly focused question?
- 2. Did the look for the right sort of papers?
- 3. Were all the important papers included?
- 4. Was the quality of the papers assessed?
- 5. If the results were combined was it reasonable to do so?
- 6. What are the overall results?
- 7. How precise are the results?
- 8. Will the results help locally?



## Clinical Bottom Line

CBL is a summary of the best evidence, written for the population who will read it and put it to use

#### **Specific Question:**

In adults with chronic shoulder pain is a nerve ablation procedure (for the suprascapular nerve) as effective in reducing pain, in the long term compared with usual care?

#### Clinical bottom line

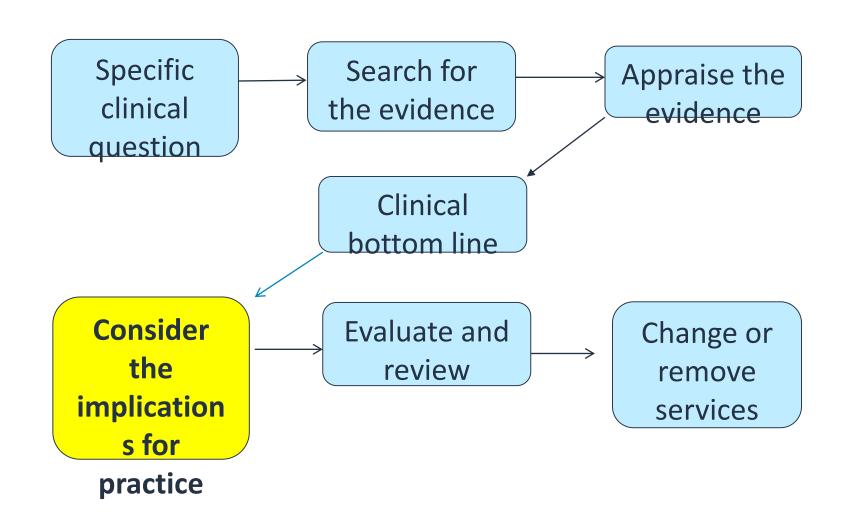
There is limited evidence to answer this question, so results should be viewed with caution. One small, well conducted RCT indicates that radiofrequency suprascapular nerve ablation is less effective than cortico-steroid injection into the shoulder complex (ACJ, GHJ and SAB) for pain and function. Injection techniques were fluoroscopy guided and undertaken in a theatre setting.

#### Why is this important?

We have previously identified that temporary suprascapular nerve (SSN) blocks are effective in reducing pain in the short term (EBP@keele) for patients with a diagnosis of osteoarthritis or frozen shoulder. Consequently this procedure is offered as part of our Musculoskeletal Interface Service pathway.

Until recently, our service had access to a clinician who undertook an ablation procedure to the suprascapular nerve for longer term pain relief. This was offered as part of a stepped care approach. This has recently ceased as the clinician in question changed roles.

Nerve ablation procedures (pulse Radiofrequency denervation for the SSN) are offered currently in the secondary care, but only by one clinician. It is not offered through our radiology department. Clinical leaders of secondary care pain and rehabilitation services



# Consider implications for practice



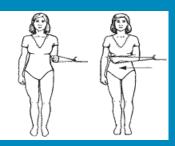
### **Good quality evidence**

Stop a particular treatment or approach



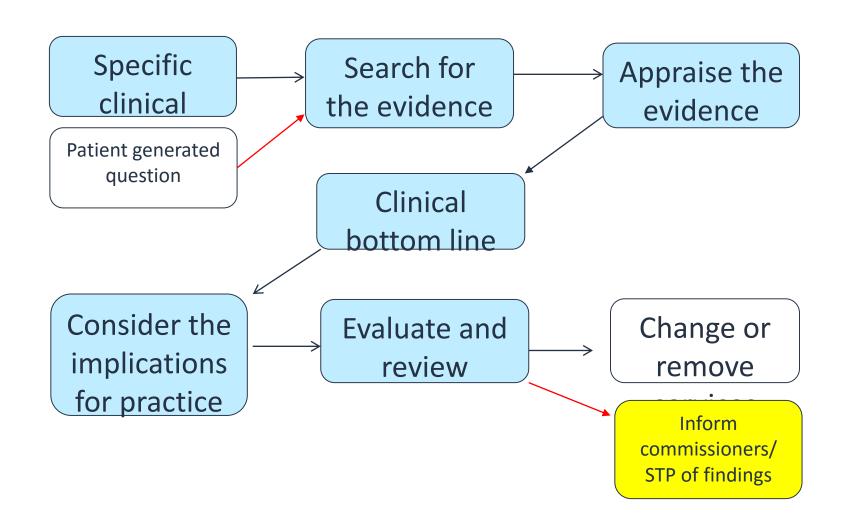
## Good quality evidence

- Support existing practice
- Commission more of a particular approach



## No good quality evidence found

- Supports researchers in answering clinically focussed questions
- Reassures practitioners that existing practice is reasonable
- Utilise local audit



- 52. In adults with de Quervain tenosynovitis, are exercises more effective in reducing pain and improving function than usual care?
- 53. In an adult population post wrist fracture, is an exercise rehabilitation programme more effective than self-management or no intervention in reducing pain and restoring function?
- 54. In adults with trigger thumb/finger does splinting improve outcomes for pain and function compared to usual care?
- 55. In adults with chronic <u>DeQuervains tenosynovitis</u> does exercise reduce pain and improve function more than usual care?
- 56. In patients with non-operatively (conservatively) managed to tendo-achilles (TA) ruptures, is accelerated rehabilitation superior to routine rehabilitation for reducing pain and return to function time, without increasing adverse events of tendon lengthening and re-rupture rates?
- 57. In adults with chronic coccydynia, is the intervention of corticosteroid injection with or without internal coccyx manipulation more effective in reducing coccyx pain than usual care?
- 58. Are image-guided injections more clinically effective than palpation-guided injections for acromioclavicular joint (ACJ) pain?
- 59. In adults and children with musculoskeletal pain and inflammatory arthritis, does <a href="https://www.hydrotherapy">hydrotherapy</a>, compared with usual care/dry land physiotherapy, reduce pain and function, improve well-being and return to work/school and is it cost effective?
- 60. In the adult population, does the spurlings sign/test have good sensitivity and specificity in detecting Cervical radiculopathy?
- 61. In Patients over the age of 40 with plantarfasciopathy, is wearing a night splint nightly for 3 months effective in reducing pain when compared to exercise therapy?
- 62. In adults with adhesive capsulitis (frozen shoulder) does the use of distention injections improve pain, function and range of movement when compared to lower volume, steroid injections?
- 63. In adults with chronic shoulder pain is a <u>nerve</u> ablation procedure (for the suprascapular nerve) as effective in reducing pain, in the long term compared with usual care?
- 64. Does the addition of a knee brace, restriciting range of movement, provide improved outcomes compared to rehabilitation alone in meniscal repairs?

## 44 evidence based recommendations:

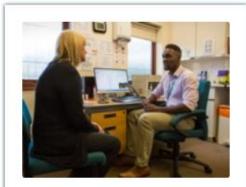
- ✓ 29 reassured clinicians that no changes to current practice was needed
- √ 12 resulted in recommendations for change in practice
- √ 3 resulted in future research recommendations which resulted in trials (hand osteoarthritis, shoulder pain, and telephone triage)

## Evidence Based practice (EBP) groups

We have three Evidence Based Practice (EBP) groups: General Practice EBM group; Practice Nursing EBP group (supported by the North Staffordshire and Stoke CCG and nominated for General Practice Team of the Year Award 2016); and Musculoskeletal Care (winner of a BSR Best Practice Award 2016).



Allied Health Professionals Group

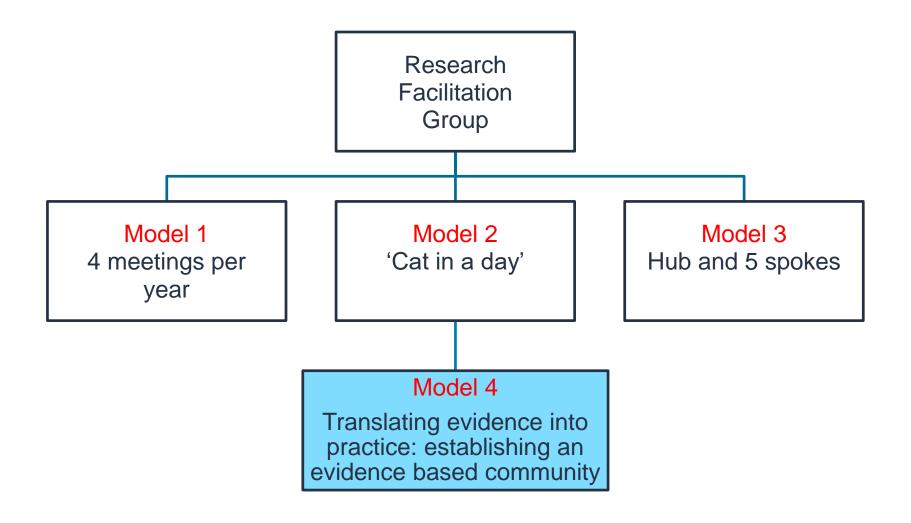


General Practitioner Group



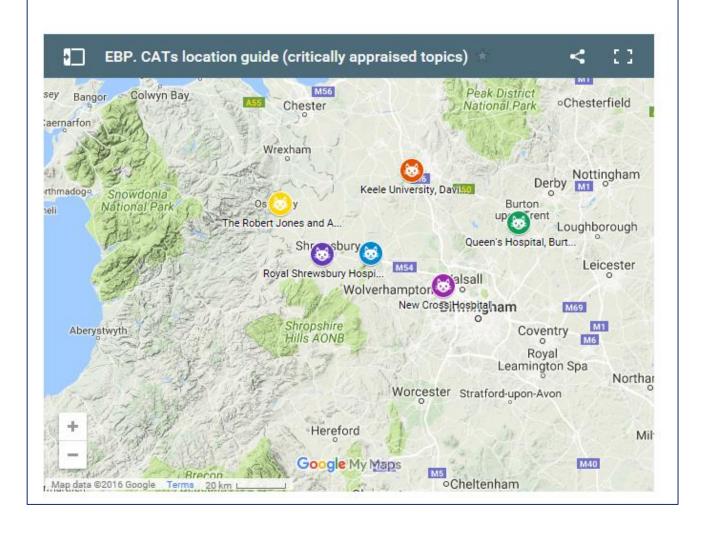
General Practice Nurse Group

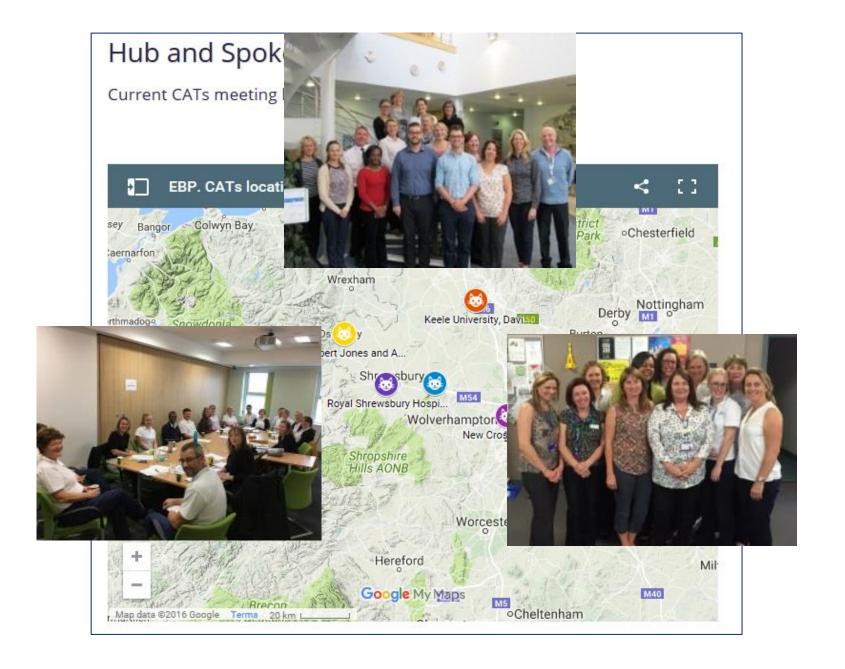
## Our models

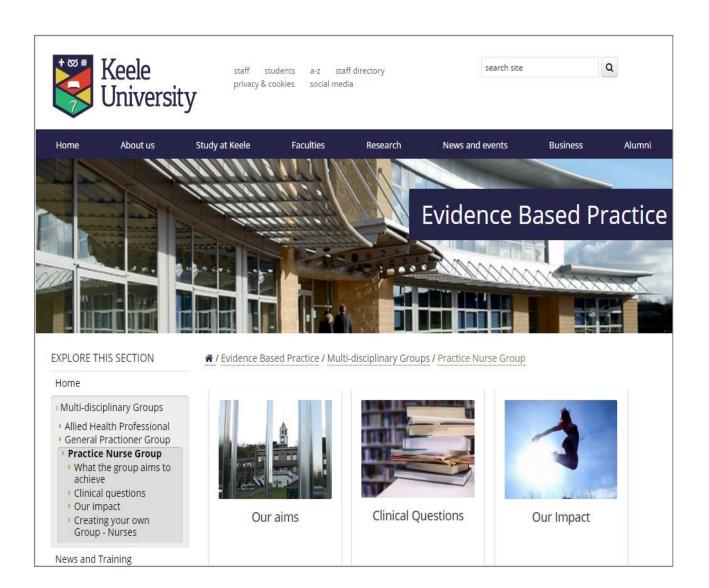


## **Hub and Spoke Groups**

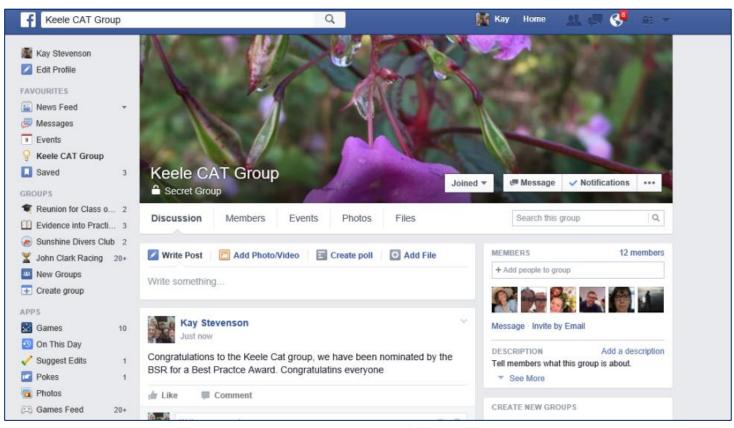
Current CATs meeting locations







ebp@keele





#keelecatgroup

# 1. CAT group work:

Identify clinically important questions you would like to ask

Rank them in priority

- With the top priority question develop a PICO
- Feedback

# 2. CAT group work

- Using the finished CAT question provided –what are your next steps to influence change in practice?
- -think about: stakeholders; means to influence these stakeholders; considerations and challenges that may need to be considered etc.

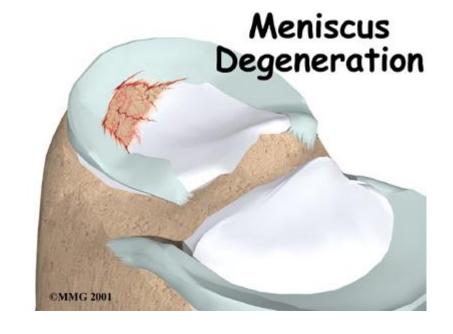
### Clinical bottom line

There is good quality evidence to suggest there is little benefit of arthroscopic surgery for degenerative meniscal tears over a physiotherapy programme for older adults.

Good quality evidence suggests there is no difference in the pain, functional outcome or satisfaction between those having surgery compared with a physiotherapy programme including strengthening exercises.

## Degenerative meniscal tears

- Increased use of MRI scans
- High referral to orthopaedics



# PICO principle

P

#### Patient, Population or Problem

What are the characteristics of the patient or population? What is the condition or disease of interest?

Т

#### Intervention or Exposure

What do you want to do with this patient (e.g. treat, diagnose, observe)?

C

#### Comparison

What is the alternative to the intervention (e.g. placebo, different drug, surgery)?

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#### Outcome

What are the relevant outcomes (e.g. morbidity, death, complications)?

Patients with degenerative meniscal tears

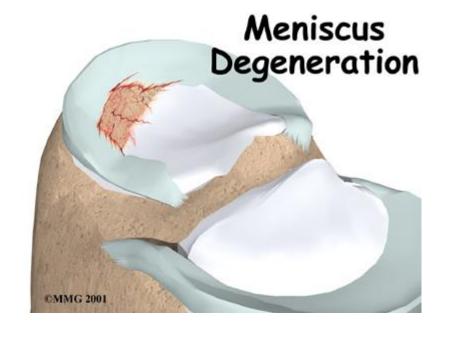
Physiotherapy

Surgery

Pain, function and cost

# Degenerative meniscal tears

 'In adults with degenerate meniscal tears of the knee is physiotherapy as clinically and cost effective as surgery?'



## Clinical bottom line

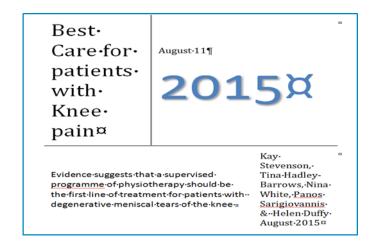
There is good quality evidence to suggest there is little benefit of arthroscopic surgery for degenerative meniscal tears over a physiotherapy programme for older adults.

Good quality evidence suggests there is no difference in the pain, functional outcome or satisfaction between those having surgery compared with a physiotherapy programme including strengthening exercises.



# Impact for services

- Care for patients
- This process gave us data on harmful effect of surgery
- Need to ensure we commission enough good quality physio services locally
- The group wrote a paper with our results to Clinical Commissioning group (CCG)



# **Impact**

- We are updating this CAT
- Results will be embedded in pathways of care
- Commissioners now asking for our work







0

In adults with degenerative meniscal tears in the knee, is physiotherapy as clinical and cost effective as surgery?



Good quality evidence suggests there is no difference in the pain, functional outcome or satisfaction between those patients having surgery compared with a physiotherapy programme including strengthening exercises.



Commissioning paper. Osteoarthritis Pathway development



Is hand therapy more effective than usual care in maintaining function and improving coping in adults with hand arthritis?



Clinical Bottom Line We were unable to determine whether hand therapy is more effective than usual care in maintaining function.

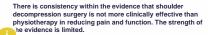
and improving coping in adults with hand arthritis. This lack of ividence led to the development of a multicenter RCT:

The SMOotH Study - Self Management in Osteoarthritis of the Hand: a randomised controlled trial in the community



Q

In adults with shoulder subacromial pain/subacromial impingement syndrome, is shoulder decompression surgery more clinically and cost effective than physiotherapy in reducing pain and improving unction?



Because of lower costs and lower risk of possible complications, conservative treatment may be preferred to surgery. Patients

Should be offered a stepped care approach, ensuring they receive high quality physiotherapy prior to referral on for a orthopaedic surgical opinion. Commissioning paper planne

# "What's the evidence...?" CAT groups find Clinical bottom lines

Q

In an adult population is a corticosteroid injection a safe and effective treatment for tennis elbow compared to usual care?



- A steroid injection will reduce pain in the short term, but its effect is similar to NSAIDs. This effect does not last into the medium or long term
- There is evidence to suggest that receiving an injection after 6 weeks of symptom duration may result in poorer clinical outcome and greater reoccurrence at 12 months
- Repeated corticosteroid injections may be associated with poorer long term outcome, and a greater need for surgery when compared to one injection
- The most common complications are post injection pain 10.7% and skin atrophy or depigmentation (4%). No serious adverse incidents reported.



Clinicians should consider the benefits and risks of

offering one or more corticosteroid injection for those presenting with symptoms over 6



In adults with plantar fasciitis, does the use of a barefoot science foot Orthoses compared with other foot orthoses improve pain and adherence?



There was no good quality evidence to answer this question.



This lack of evidence has led to TREADON a Feasibility and Pilot

trial currently underway to inform a future Randomised Control

Trial of advice, exercise and foot orthoses as intervention

lults with plantar help pain (PHP)

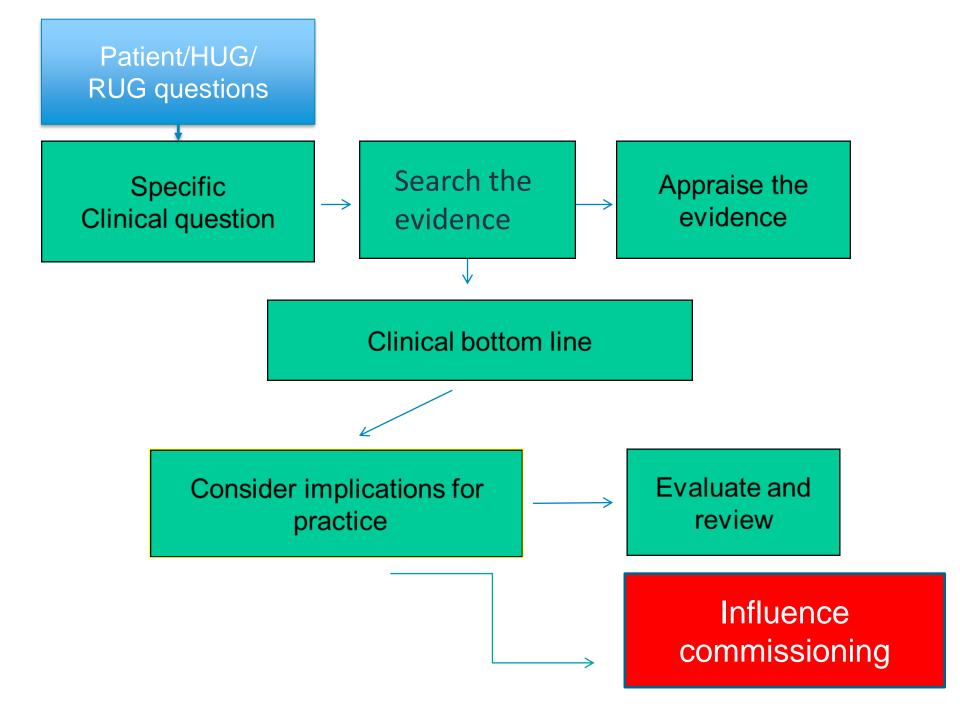


In adults and children with musculoskeletal pain is Hydrotherapy/Aquatic Therapy as clinically & cost effective as land based Physiotherapy in terms of pain & function.



In adults and children with Osteoarthritis and Rheumatoid arthritis, there is good quality evidence to suggest it is as clinically effective as land based Physiotherapy in the short term. It should be considered as a frontline management option to help manage symptoms particularly for patients who have mobility problems and find land based exercise difficult. There is no evidence available on the long term effects or on the cost effectiveness of s modality.

Future research should identify the patient groups that would benefit the most from therapeutic aquatic exercise, the effects of aquatic exercise and cost effectiveness.





# Thank you for your time kay.stevenson@ssotp.nhs.uk









# Closing summary – what next?

Phillip Hulse

Vice-Chair

The Chartered Society of Physiotherapy

#WMCSP